

In the Claims:

Please cancel claims 14-20 and amend the remaining claims as indicated below. This listing of claims replaces all prior versions.

1. (currently amended) A method for analyzing a suspected defect in an integrated circuit die, the method comprising:

using a state-changing operation of suspect circuitry having the suspected defect to cause a failure due to the suspect circuitry and therein, to facilitate confirmation that the suspected defect should be further analyzed;

in response to confirmation that the suspected defect should be further analyzed, removing substrate from a selected portion of the die to expose the suspected defect; recording a plurality of images of the selected portion as substrate is being removed therefrom; and

creating a three-dimensional image of the selected portion of the die with the plurality of images and analyzing the die therefrom.

2. (currently amended) The method of claim 1, wherein removing substrate includes cross-sectioning the die, and wherein the suspected defect is a resistive defect characterized by one of the following: defective electrical contact, void, open circuit, short circuit.

3. (original) The method of claim 1, wherein removing substrate includes using a FIB.

4. (original) The method of claim 1, wherein recording a plurality of images includes using a SEM.

5. (original) The method of claim 1, wherein removing substrate includes using a FIB produced by a dual FIB/e-beam device, and wherein recording a plurality of images includes using the e-beam of the dual FIB/e-beam device to create a SEM image.

6. (original) The method of claim 5, further comprising programming a controller adapted to control the dual FIB/e-beam device to effect the recording of a sufficient amount of SEM images to create a three-dimensional image of the selected portion.
7. (original) The method of claim 1, wherein removing substrate from the selected portion includes exposing a defect in the die, and wherein creating a three-dimensional image includes creating a three-dimensional image of the defect.
8. (original) The method of claim 1, wherein creating a three-dimensional image includes combining the plurality of images of the selected portion and creating a combined image therefrom.
9. (original) The method of claim 1, further comprising using the three-dimensional image to detect a defect in the die.
10. (original) The method of claim 9, wherein creating a three-dimensional image includes creating an image of the defect, further comprising using the image of the detected defect to analyze the defect.
11. (original) The method of claim 1, wherein creating a three dimensional image includes using selected ones of the plurality of images of the selected portion to create a three dimensional image of less than the entire selected portion.
12. (original) The method of claim 1, further comprising editing the three dimensional image to create an edited image of only a portion of the three-dimensional image.
13. (original) The method of claim 12, wherein editing the three-dimensional image includes creating an image of a cross-section of the selected portion.
- 14-20. (canceled)